

Translation

PATENT COOPERATION TREATY

PCT/EP2003/003614



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000053429	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/003614	International filing date (<i>day/month/year</i>) 08 April 2003 (08.04.2003)	Priority date (<i>day/month/year</i>) 18 April 2002 (18.04.2002)
International Patent Classification (IPC) or national classification and IPC C08G 69/00		
Applicant BASF AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 17 September 2003 (17.09.2003)	Date of completion of this report 20 November 2003 (20.11.2003)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/003614

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-15 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-9 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/03614

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-9	YES
	Claims		NO
Inventive step (IS)	Claims	1-9	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims		NO

2. Citations and explanations

This report makes reference to the following documents:

D1: WO 99 38908 A (BASF AG; FUCHS EBERHARD (DE);
HILDEBRANDT VOLKER (DE); MOHR SCHLADT) 5 August
1999 (1999-08-05), cited in the application
D2: DE 100 33 544 (BASF AG) 24 January 2002 (2002-01-
24)

1. The present application relates to a method for producing polyamides (claims 1 to 9).
2. D1 discloses a method for producing polyamides (see claims 1 to 10). D1 describes titanium dioxide as the catalyst (examples 4-6). Page 11, lines 24-27, specifies that the BET surface area is "preferably more than 40 m²/g, particularly preferably more than 100 m²/g". In addition, the following is specified: "For a smaller BET surface area, the bulk volume should be correspondingly higher in order to ensure sufficient catalyst activity".

D1 does not disclose the range of 5 to 35 m²/g.

3. D2 is comparable to D1 (see column 7, lines 25-35).
4. D1 is regarded as the closest prior art in relation to the subject matter of claim 1.

The subject matter of claim 1 differs therefrom in that a titanium dioxide catalyst with a BET surface area in the range of 5 to 35 m²/g, determined according to the German Industrial Standard DIN 66131 using the multipoint method by means of the volumetric process, is selected.

The problem addressed by the present invention was that of devising a technically simple and economical method according to claim 1, which increases the lifespan of the catalyst, without reducing its activity (reduction in the titanium dioxide content of the polymer).

This problem has been solved. Examples 1 and 2 show a lower titanium dioxide content in the polymer when the catalyst according to D1 (comparative example 1) has been replaced by a catalyst according to the invention. A person skilled in the art could not have expected a reduction in the titanium dioxide content in light of the disclosures in D1 and D2 (see points 2 and 3 above).

5. Novelty and inventive step can therefore be recognized.
6. The present application appears to meet the criterion stipulated in PCT Article 33(4) because the subject matter of claims 1 to 9 is industrially applicable.